

**Amendments to the Specification**

Please amend the specification as follows:

On page 19, please replace the 1<sup>st</sup> full paragraph to recite the following (amendments are underlined):

While this embodiment has been described with reference to the case of constituting the pressurized atmosphere of nitrogen and oxygen, the pressurized atmosphere may be constituted of rare gas and oxygen. Therefore, the pressurized atmosphere may be constituted of argon and oxygen, for example.

On page 24, replace the second paragraph with the following paragraph (amendments are underlined):

Referring to Fig. 12, the sintering densities of oxide superconductor filaments (oxide superconductors) are about 93 % to 96 % at pressing speeds of at least 0.05 MPa/min. in a case of starting pressurization when the temperature of an atmosphere is 30°C. In a case of starting pressurization after the temperature of the atmosphere reaches 400°C, on the other hand, the sintering densities of the oxide superconductor filaments are at least about 95 % at the pressing speeds of at least 0.05 MPa/min. In a case of starting pressurization after the temperature of the atmosphere reaches 600°C, further, the sintering densities of the oxide superconductor filaments are at least about 97 % at the pressing speeds of at least 0.05 MPa/min., and the sintering densities of the oxide superconductor filaments are at least about 98 % at pressing speeds of at least 0.1 MPa/min. In both cases of starting pressurization after the temperature of the atmosphere reaches 400°C and 600°C respectively, in addition, the sintering densities of the oxide superconductor filaments are at least about 99 % at pressing speeds of at least 0.15 MPa/min. The sintering density is improved at a pressing speed of at least 0.05 MPa/min. conceivably because the speed of pressurizing gas penetrating into the wire through pinholes is less than about 0.05 MPa/min. and the pressure in the atmosphere can be regularly kept higher than that in the wire since the wire is pressurized at a speed faster than this penetration speed. It is understood from the results shown in Fig. 12 that the sintering density of the oxide superconductor filaments is improved when the pressurization is started after the temperature of the atmosphere exceeds 400°C, preferably 600°C. It is also

understood that the sintering density of the oxide superconductor filaments is further improved when the speed of pressurization is set to preferably at least 0.05 MPa/min. more preferably at least 0.1 MPa/min. This is conceivably for the following reason:

On page 26, replace the second full paragraph with the following paragraph (amendment shown as strikethrough):

Then, the volume ( $V_s$  (cm<sup>3</sup>)) of the sheath part is calculated from the known silver gravity (10.5 (g/cm<sup>3</sup>)), and the volume ( $V_f$  (cm<sup>3</sup>)) of oxide superconductor filaments is calculated from the volume of the sheath part. The density  $\rho_f$  of the oxide superconductor filaments is calculated from the volume of the oxide superconductor filaments. More specifically, the density  $\rho_f$  is calculated according to the following equations (5) to (7):

Please replace the last paragraph starting on page 26 and ending on page 27 with the following paragraph:

On the other hand, a value 6.35 g/cm<sup>3</sup> is employed as the theoretical density of the oxide superconductor filaments. This value is calculated by the following method: The atomic ratio of a Bi2223 phase in the oxide superconductor filaments is calculated by ICP emission spectroscopy and EDX-P (energy dispersive X-ray spectroscopy) analysis. The lattice constant of the Bi2223 phase is obtained by X-ray analysis, for calculating the values of a- and c-axes. The theoretical density is calculated from these values.

Please replace the second paragraph starting page 36 and ending on page 36 with the following paragraph:

Powder having composition ratios of Bi:Pb:Sr:Ca:Cu = 1.82:0.33:1.92:2.01:3.02 was prepared from Bi<sub>2</sub>O<sub>3</sub>, PbO, SrCO<sub>3</sub>, CaCO<sub>3</sub> and CuO. This powder was heat-treated at a temperature of 750°C for 10 hours, and thereafter heat-treated at a temperature of 800°C for 8 hours. Thereafter a sintered body obtained through the heat treatments was pulverized in an automatic mortar. Powder obtained through the pulverization was heat-treated at a temperature of 850°C for 4 hours, and a sintered body obtained through the heat treatment was pulverized in an automatic mortar. The powder obtained through the pulverization was heat-treated, and thereafter filled into a silver pipe of 36 mm in outer diameter and 30 mm in

inner diameter (step S1). Then, the silver pipe filled with the powder was wiredrawn for obtaining a single-filamentary wire (step S1a). Further, 61 such single-filamentary wires were bundled and fitted into a silver pipe of 36 mm in outer diameter and 31 mm in inner diameter (step S1b). Then, the silver pipe fitted with the plurality of single-filamentary wires was wiredrawn for obtaining a multifilamentary wire of 1.5 mm in diameter (step S2). Then, this multifilamentary wire was twisted at twisting pitches of 20 mm, 15 mm, 10 mm and 5 mm (step S2a). Thereafter primary rolling (step S3) was performed for obtaining a tape-shaped wire having a thickness of 0.26 mm, a width of 3.7 mm and a length of 100 m. Then, this wire was heat-treated at a temperature of 840°C in an atmosphere having an oxygen concentration of 8 % for 30 hours as a first heat treatment (step S4). Then, secondary rolling (step S5) was performed for drafting the wire by 8 %. Then, this wire was heat-treated at a temperature of 820°C in an atmosphere having a total pressure of 25 MPa and a partial oxygen pressure of 8 kPa for 50 hours as a second heat treatment (step S6). At a heat-up time before the second heat treatment (step S6), pressurization was started from a temperature reducing the 0.2 % yield strength of the silver pipe below 25 MPa. A sample 1 was prepared from the twisted oxide superconducting wire 1a obtained through the aforementioned steps.

Please replace the second full paragraph on page 38 with the following:

Fig. 21 is a sectional view conceptually showing the structure of an oxide superconducting wire having a ceramic covering layer. As shown in Fig. 21, an oxide superconducting wire 1c having a ceramic covering layer has a plurality of oxide superconductor filaments 2c extending in the longitudinal direction (direction perpendicular to the plane of the figure), a ceramic covering layer 21 covering the plurality of oxide superconductor filaments 2c and a sheath part 3c covering the ceramic covering layer 21. The ceramic covering layer 21 is composed of a metallic oxide, for example, and converted to a non-superconductor at an operation temperature of the oxide superconducting wire 1c. A method of manufacturing the oxide superconducting wire 1c having this ceramic covering layer 21 is now described.

**Amendments to the Title**

Please amend the title of the application to recite:

METHOD OF MANUFACTURING OXIDE SUPERCONDUCTING WIRE, METHOD OF  
MODIFYING OXIDE SUPERCONDUCTING WIRE AND OXIDE SUPERCONDUCTING  
WIRE